

REMARKS:

Applicants respectfully request continued examination of the present patent application pursuant to 37 C.F.R. § 1.114.

Claims 1, 6, and 10-15 have been amended by this paper and claims 2, 3 and 7-9 have been cancelled by this paper.

Claims 1 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,435,676 to Murray et al. (the "Murray et al. reference"). The rejections are respectfully traversed.

The Murray et al. reference discloses a printer ink cartridge 40 including a body 42, a jet plate assembly 44, a plurality of electrical conductors formed into a flexible connector 46, a control and driver circuit 47 (Fig. 5), a memory storage element 48 (Fig. 5) and a plurality of electrical contacts 50. (Col. 4, ll. 34-40.) The jet plate assembly 44 may include a plurality of nozzles 74. (Col. 5, ll. 33-35.)

The memory storage element 48 may include data related to the cartridge 40, such as the date of manufacture of the cartridge, and data related to the ink stored within the cartridge, such as ink type, lot number of the ink and the spectral analysis of the ink. (Col. 12, ll. 34-52.) Furthermore, the memory storage element 48 may include data related to the approximate number of ink drops expelled from the cartridge 40. (Col. 12, ll. 53-54.)

However, as conceded by the Examiner on p. 3 of the Office action, the Murray et al. reference does not disclose storing data regarding the location of at least one missing or malfunctioning nozzle or the status or location of nozzles.

Thus, the Murray et al. reference cannot anticipate claims 1 and 6, as amended by this paper. Withdrawal of the rejections of claims 1 and 6 under § 102(b) is respectfully requested.

Claims 2-5, 7-11 and 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Murray et al. reference in view of U.S. Patent No. 6,517,184 to Bruch et al. (the "Bruch et al. reference"). The rejections are respectfully traversed.

The Bruch et al. reference discloses a method for servicing a printhead including identifying malfunctioning nozzles on the printhead during a detection operation, storing the results of the detection operation in a memory device and servicing malfunctioning nozzles with

a cleaner unit. The memory device is associated with a drop detection unit 530. (Col. 11, ll. 56-58.)

Thus, the Bruch et al. reference does not teach storing the location of at least one missing or malfunctioning nozzle in a printhead memory. Rather, the Bruch et al. reference discloses storing data regarding malfunctioning nozzles in a drop detection unit associated with a printhead cleaning/servicing device.

Nonetheless, the Examiner argues that the combination of the Murray et al. and Bruch et al. references obviates claims directed to a printhead having a printhead memory including data regarding the location of at least one missing or malfunctioning nozzle of an array of nozzles. Applicants respectfully disagree.

A basic requirement for a prima facie case of obviousness based upon a combination of references is a reason for combining the references. (MPEP § 2143.) It is submitted that the Examiner has failed to articulate a sufficient reason for combining the Murray et al. and Bruch et al. references. It is further submitted that one skilled in the art would not combine the Murray et al. and Bruch et al. references absent the hindsight gleaned from the disclosure of the present application.

As discussed above, the Murray et al. reference discloses a memory storage element on a printhead cartridge, but makes no mention of storing data regarding the location of missing or malfunctioning nozzles. The Bruch et al. reference discloses storing data regarding malfunctioning nozzles in a memory device, but the memory device is associated with a printhead cleaning/servicing unit, not with the printer itself, and certainly not with the printhead.

Modifying the Bruch et al. reference as proposed by the Examiner would substantially change the principle of operation of the Bruch et al. reference and would most likely render the cleaning/servicing system of the Bruch et al. reference incapable of performing its intended task. As such, a person skilled in the art would not modify the Bruch et al. reference such that the memory device is disposed on a printhead rather than on a drop detection unit.

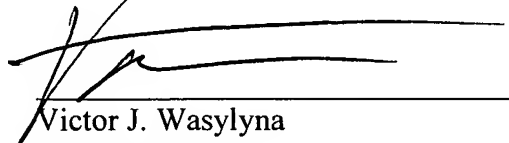
Accordingly, withdrawal of the rejections based upon the combination of the Murray et al. and Bruch et al. references is respectfully requested.

Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Murray et al. and Bruch et al. references in view of U.S. Patent No. 6,719,391 to Kojima. For the reasons expressed above, the rejection of claim 12 is respectfully traversed.

Accordingly, it is submitted that the pending claims of the present application are in condition for allowance and formal notice thereof is respectfully requested.

The Commissioner is authorized to charge any additional fees required by this paper or to credit any overpayment to Deposit Account No. 20-0809.

Respectfully submitted,



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